

The vertebræ are known from isolated and connected specimens which indicate a larger number than usual of rib-bearing presacral vertebræ, which appear to be not fewer than nineteen, and may have numbered twenty-six. The sacral vertebræ are deeply cupped, and the sacral ribs are developed as in *Nothosaurus* and *Pareiasaurus*. The sacral ribs form part of the articular face of the first sacral vertebra. The pelvis is imperfectly known; the ilium is not so extended as in Dicynodonts, and conforms to the type of *Phoco-saurus*, which is regarded as Theriodont. The pubis and ischium are united together on the Dicynodont plan, but are only moderately developed.

The scapular arch is completely known, and is formed of scapula, coracoid, and pre-coracoid as in *Dicynodon* and *Pareiasaurus*. The humerus and bones of the fore limb were relatively short, and only fragments have been preserved which appear to be referable to ulna and radius.

The hind limb is known from several examples of the femur, which resembles that of *Pareiasaurus* in the proximal end, but at the distal end is more like the type described as *Saurodesmus*.

The tibia is known from its proximal and distal ends; it has a general resemblance to that of *Pareiasaurus*, but is more slender. These types are regarded as constituting a distinct group, named Deuterosauria, which is in many respects intermediate between the Placodontia and Theriodontia, but in skull structure appears also to approach Nothosaurs and Plesiosaurs.—*From the Proceedings of the Royal Society*, June 10th, 1893.

*On a Terrestrial Leech from Chili.* By M. RAPHAEL BLANCHARD.

The discovery of a species constituting a transition between two groups of animals which were previously quite distinct deserves to attract in a special manner the attention of naturalists. This is why we think it our duty to report to the Academy the existence of a Hirudinean which is clearly intermediate between the Glossiphonidæ and the Hirudinidæ.

The animal in question is a land-leech, which is distributed in the south of Chili, between latitudes 40° and 43°, in the provinces Valdivia and Chiloe. In 1871 it was briefly described by Grube under the name *Hirudo brevis*; but it may be said that this author failed to recognize any of the remarkable characters which the creature exhibits and which give it a high importance from the point of view of the genetic connexion of the different species. This leech cannot be retained in the genus *Hirudo* as it has recently been defined by the investigations of Whitman and ourselves. We create for it the new genus *Mesobdella*; this name serves to recall the fact that the species which we are discussing is intermediate between two different groups. In future, therefore, it should be designated *Mesobdella brevis*, Grube.

As contracted by alcohol the animal is 16 millim. in length and 4.5 millim. in width; the posterior sucker is circular and 2 millim. in width. The body is pyriform in appearance, as in the majority of the Glossiphonidæ, but it is not so decidedly flattened as in the

case of the latter. At the first glance we scarcely hesitate, however, to consider this leech as a Glossiphonid, for the regular repetition of the segmentary papillæ and of the nephridial pores on every third annulus clearly indicates that the somite is actually composed of three annuli; moreover the number of the annuli only amounts to sixty-two, and the intestine bears eight pairs of large lateral cæca, of which the last pair is continued for a considerable distance backwards.

On the other hand, our species possesses ten large black eyes, the general appearance of which recalls in a striking manner those of the genus *Hæmadipsa*, the land-leeches of Malaysia; the first four pairs of eyes are still contiguous one with another, owing to the reduction of each of the first three somites to a single annulus; but the fourth and the fifth pairs are separated by one annulus, in consequence of the reduction of somite iv. to two annuli. In other words, the eyes of *Hæmadipsa* are borne by the annuli 1, 2, 3, 4, and 7, while those of *Mesobdella* are found upon the annuli 1, 2, 3, 4, and 6\*. This fact already indicates a great tendency towards the shortening of the somites. As a matter of fact the somites i.-iii. are each composed of a single annulus; somite iv. has two annuli; somites v.-xxii. possess three annuli each; somite xxiii. has two annuli; and somite xxiv., which is the last, has a single annulus. A remarkable fact is that the coalescence of the body is accentuated to such a degree that somites xxv. and xxvi., which are functionally less important than those of the anterior extremity, have disappeared without leaving the least trace behind them.

The apertures of the genital organs occupy their normal situation; the testis opens upon somite x., between the annuli 21 and 22, the ovary upon somite xi., between the annuli 25 and 26.

The segmentary papillæ are disposed precisely as in the Hirudinidæ; they form eight longitudinal rows on the dorsal surface, and those of the inner lateral row are in a direct line with the eyes of the last pair. This character forms a further connexion between *Mesobdella* and the Hirudinidæ. Lastly, it may be added that our species has no proboscis, but possesses three little jaws, situated exactly as in the Hirudinidæ, and each armed with from fifty-five to sixty teeth.

To sum up what has been stated: owing to its ambiguous characters *Mesobdella brevis* connects in a remarkable manner the Glossiphonidæ with the Hirudinidæ. Among the latter it is nearest allied to the Hæmadipsinæ both by its mode of life as well as by the arrangement of its eyes; but it is clearly distinguished from them, as well as from all the other Hirudinidæ, by the high degree of coalescence attained by its somites. The existence of this intermediate form shows that the two families which have here been considered are derived from a common stock, from which the Glossiphonidæ have apparently diverged less than the Hirudinidæ.—*Comptes Rendus*, t. cxvi. no. 9 (Feb. 27, 1893), pp. 446, 447.

\* The eyes appear to be arranged in the same manner in *Cyclobdella glabra*, Weyenbergh, from the Argentine Republic; but otherwise there is no resemblance between this species and *Mesobdella*.